

Claims

I claim:

1. A method for caching data objects, comprising:
 - providing a cache having a cache log for the data objects;
 - assigning discard rules to the data objects on a class basis;
 - predicting needed data objects based on the cache log;
 - prefetching the needed data objects into the cache; and
 - discarding particular data objects from the cache based on the discard rules.
2. The method of claim 1, further comprising refreshing the needed data objects in the cache based on refresh rules.
3. The method of claim 2, wherein the needed data objects are refreshed from a refresh queue.
4. The method of claim 1, wherein the discarding step comprises discarding the particular data objects from the cache to a discard queue based on the cache rules.
5. The method of claim 1, further comprising:
 - receiving a request for certain data objects; and
 - retrieving the certain data objects from the cache.

6. The method of claim 1, wherein the cache log comprises a relational database.
7. The method of claim 1, wherein the needed data objects are predicted from a history of requests as tracked in the cache log.
8. The method of claim 1, further comprising dynamically adjusting the discard rules.
9. The method of claim 1, wherein the predicting step comprises predicting a sequence of needed data objects .

10. A system for caching data objects, comprising:

a logger for logging a history of requests for data objects in a cache log;

a predictor for analyzing the cache log and prefetching needed data objects into a cache based on the history of requests; and

a request analyzer for discarding data objects from the cache based on discard rules assigned to the data objects, wherein the discard rules are assigned to the data objects on a class basis.

11. The system of claim 10, further comprising a governor for concurrently managing a refresh queue and a discard queue.

12. The system of claim 11, wherein the refresh queue contains refreshed data objects, and wherein the refreshed data objects are moved from the refresh queue into the cache based on refresh rules by a queue refresher.

13. The system of claim 11, wherein the discard queue contains data objects discarded from the cache by the request analyzer based on the discard rules.

14. The system of claim 10, wherein the request analyzer further dynamically updates the discard rules.

15. The system of claim 10, further comprising a request handler for receiving a request for a certain data object and retrieving the certain data object from the cache.

16. The system of claim 10, wherein the cache log comprises a relational database.

17. The system of claim 10, wherein the predictor predicts a sequence of needed data objects and prefetches the sequence of needed data objects into the cache.

18. A program product stored on a recordable medium for caching data objects, which when executed, comprises:

program code for logging a history of requests for data objects in a cache log;

program code for analyzing the cache log and prefetching needed data objects into a cache based on the history of requests; and

program code for discarding data objects from the cache based on discard rules assigned to the data objects, wherein the discard rules are assigned to the data objects on a class basis.

19. The program product of claim 18, further comprising program code for managing a refresh queue and a discard queue.

20. The program product of claim 19, wherein the refresh queue contains refreshed data objects, and wherein the refreshed data objects are moved from the refresh queue into the cache based on refresh rules.

21. The program product of claim 19, wherein the discard queue contains data objects discarded from the cache by the program code for analyzing based on the discard rules.

22. The program product of claim 18, further comprising program code for dynamically updates the discard rules.

23. The program product of claim 18, further comprising program code for receiving a request for a certain data object and retrieving the certain data object from the cache.

24. The program product of claim 18, wherein the cache log comprises a relational database.

25. The program product of claim 18, wherein the program code for analyzing predicts a sequence of needed data objects and prefetches the sequence of needed data objects into the cache.